Application No. 09/893,299   **Atty Docket No. INXT 1016-1**

REMARKS

Claims 1-12 are pending in this application. The rejections under Section 103(a) were previously traversed without amendment.

Here, we respond to the Examiner's arguments on page 5, where he replies regarding requirements of MPEP 2143.01 for combining references. We hope that the Examiner is persuaded to look again at whether *Google*'s invention is permissibly modified, under § 2143.01, by adopting a computational method unrelated to the invention which undisputedly would require too much computing resources for Google to use in its primary business of mapping the Internet.

The legal rules are clear and the Examiner took no exception to how they are stated in the MPEP and a PTO training manual:

THE PROPOSED MODIFICATION CANNOT RENDER THE PRIOR ART UNSATISFACTORY FOR ITS INTENDED PURPOSE

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984) (Claimed device was a blood filter assembly for use during medical procedures wherein both the inlet and outlet for the blood were located at the bottom end of the filter assembly, and wherein a gas vent was present at the top of the filter assembly. The prior art reference taught a liquid strainer for removing dirt and water from gasoline and other light oils wherein the inlet and outlet were at the top of the device, and wherein a pet-cock (stopcock) was located at the bottom of the device for periodically removing the collected dirt and water. The reference further taught that the separation is assisted by gravity. The Board concluded the claims were prima facie obvious, reasoning that it would have been obvious to turn the reference device upside down. The court reversed, finding that if the prior art device was turned upside down it would be inoperable for its intended purpose because the gasoline to be filtered would be trapped at the top, the water and heavier oils sought to be separated would flow out of the outlet instead of the purified gasoline, and the screen would become clogged.).

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THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change

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the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

MPEP § 2143.01 at 2100-131 to 132 (Rev. 2, May 2004). From training materials:

A proposed modification should not "destroy a reference" by rendering the prior art invention being modified unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). ... As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. *In re Ratti*, 270 F. 2d 810, 813, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative.

Barry R.A. Weinhardt, M. Reinhart, *Obviousness Under 35 U.S.C. 103 Basic Student's Manual*, p. 24 (U.S. P.T.O. Office of Patent Policy Dissemination, Rev. 4 1998).

    This PTO guidance to examiners complements the Federal Circuit's cases. *Per curium*, the court *In re Brouwer*, 77 F.3d 422, 425, 37 U.S.P.Q.2d (BNA) 1663 (Fed. Cir. 1995) ruled:

the mere possibility that one of the esters or the active methylene group-- containing compounds disclosed in Distiller could be modified or replaced such that its use would lead to the specific sulfoalkylated resin recited in claim 8 does not make the process recited in claim 8 obvious "unless the prior art suggested the desirability of [such a] modification" or replacement. *In re Gordon*, 733 F.2d 900, 902, 221 U.S.P.Q. (BNA) 1125, 1127 (Fed. Cir. 1984).Without first knowing Brouwer's claimed process steps or the composition resulting from those steps, there is simply no suggestion in the references cited by the examiner to practice the claimed process. It was therefore not prima facie obvious.

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From this ruling, the Examiner should understand that the general statement in Pugh, col. 7 line 56 - col. 8 line 8 is too general to motivate combining specific technologies. "[W]ithout first knowing" how what these Applicants are claiming, one of ordinary skill in the art would not read Pugh as suggesting that KNN technology be substituted for improved shingles in Google's invention.

Applicants appreciate that the Examiner addressed the first rule regarding rendering a reference unsuitable for its intended purpose and we reply below. However, the Examiner missed the second rule, that the combination of references cannot change the principle of operation. In the prior response, on page 9, we pointed out that:

> Replacing improved fingerprinting of documents with construction of nearest neighbor lists would improperly change the Ohmura's principle of operation by eliminating generation of fingerprints, assignment of fingerprints to lists and comparison of new fingerprints to existing lists of fingerprints. See Col. 9. "As a proposed modification or combination of the prior art should not destroy a reference, the proposed modification or combination should not change the principle of operation of the reference. In re Ratti, 270 F. 2d 8 10, 8 13, 123 USPQ 349, 352 (CCPA 1959). This is true even if the combination proposed is operative." Barry et al., Obviousness Under 35 U.S.C. 103, supra, pp. 25-26; explaining, M.P.E.P. 2143.01.

Application of this rule, set out separately in MPEP 2143.01, was overlooked.

To reiterate, Google's invention is an improved shingle method adapted to duplicate detection while crawling the web's billions of documents. We provided objective, scholarly evidence from Chowdhury et al., "Collection Statistics for Fast Duplicate Document Detection", ACM Transactions on Information Systems, Vol. 20, No. 2, at pp. 173-174 (April 2002) that Rabin/Broder fingerprinting uses a different principle of operation (in this case, also a different function, different way, different result) than K-nearest neighbor (KNN) mapping of relationships among documents. The principles of operation are so different that there whole classes of problems (including Google's business problems) are never addressed using KNN technology, because the KNN principle of operation is too computationally expensive to apply. Chowdhury et al., supra, at pp. 173-74.

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Applicants respectfully request that finality be withdrawn, that the Examiner apply the rule from PTO manuals and training materials that "the proposed modification or combination should not change the principle of operation of the reference", and that the Examiner withdraw the obviousness rejection.

Returning to the first rule, that a combination must not render a reference unsuitable for its intended purpose, we understand the Examiner's argument, but cannot see how it could be made with any conviction. The rule would be meaningless if it could be evaded so easily. The Examiner is not allowed to ignore Google's primary intended purpose, which the patent forcefully states. The Examiner does not (and cannot) dispute that

> It is clear throughout Pugh, assigned to Google, that the problem addressed includes detecting near-duplicates "in large collections of documents ... literally billions of 'Web site' documents". Col. 1, lines 29-33; *see* Col. 3, lines 44-47. To be efficient enough to handle such large sets, Pugh introduces an improvement (col. 7, lines 26-29) on generating so-called fingerprints for elements or shingles of documents (col. 3, lines 24-26). In other words, Pugh found the standard fingerprinting too expensive to solve his problem, so he invented a cheaper way.

Instead, the Examiner looked for a secondary purpose. Practically speaking, every good patent attorney and every well-drafted patent suggest alternative applications. If the § 2143.01 rule could be evaded by pointing to secondary purposes, it wouldn't be much of a rule. We provided objective, scholarly evidence from Chowdhury et al., "Collection Statistics for Fast Duplicate Document Detection", ACM Transactions on Information Systems, Vol. 20, No. 2, at pp. 173-174 (April 2002) that KNN computations would be too expensive for Google to substitute for improved fingerprinting – recall that Google's patent describes itself as an improved fingerprinting technology, reinforcing the explicitly stated need to deal efficiently with billions of documents. One cannot say with conviction (or without getting a "red face") that the intended purpose of Google's invention is ambiguous for purposes of applying § 2143.01. Accordingly, because substituting KNN mapping for the improved shingle method that Google discloses would produce a result unsuitable for efficiently detecting near-duplicates "in large collections of documents ... literally

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billions of 'Web site' documents", MPEP § 2143.01 bars the proposed combination.

Applicants respectfully request that the Examiner apply the rule from PTO manuals and training materials that the proposed modification or combination cannot render the reference unsuitable for its intended purpose (what Google invented it to do) and that the Examiner withdraw the obviousness rejection.

Finally, we turn to the quality of suggestion to combine references. In the final rejection, the Examiner points to Pugh col. 7, line 56 – col. 8, line 6, which is reproduced below:

In response to the detected duplicate documents, the present invention may also function to eliminate duplicate documents (e.g., keeping the one with best PageRank, with best trust of host, that is the most recent) Alternatively, the present invention may function to generate clusters of near-duplicate documents, in which a transitive property is assumed (i.e., if document A is a near-duplicate of document B, and document B is a near-duplicate of document C, then document A is considered a near-duplicate of document C). Each document may have an identifier for identifying a cluster with which it is associated. In this alternative, in response to a search query, if two candidate result documents belong to the same cluster and if the two candidate result documents match the query equally well (e.g., have the same title and/or snippet) if both appear in the same group of results (e.g., first page), only the one deemed more likely to be relevant (e.g., by virtue of a high PageRank, being more recent, etc.) is returned. .

This excerpt does not motivate one of skill in the art to substitute KNN mapping for improved fingerprinting. In light of the *per curium* ruling by the court *In re Brouwer*, one of skill in the art would not consider this passage to motivate, teach or suggest mixing-and-matching between improved fingerprinting and KNN mapping, without first knowing what these Applicants claim. Therefore, this passage does not supply the required motivation to combine.

Moreover, Prager is missing more than this passage can motivate or Pugh can supply. Prager does not include fingerprinting or use of fingerprints to detect or cluster near-duplicate or duplicate documents. There is no reference in Prager to detecting duplicate documents. Taking fingerprints away from Pugh and substituting KNN mapping takes away duplicate detection and leaves the resulting combination short of the claimed method.

For the several reasons set out above, reconsideration of rejected claims 1-12 is respectfully requested.

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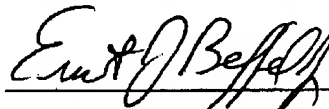**Application No. 09/893,299**   **Atty Docket No. INXT 1016-1**

CONCLUSION

Applicants respectfully submit that the claims, as stated herein, are in condition for allowance and solicit acceptance of the claims, in light of these remarks. Applicants request that the Examiner call and interview this case before issuing an advisory action, so that the Applicants' perspective and the proposed combination are both well understood, as is appropriate prior to appeal.

The undersigned can ordinarily be reached at his office at 650-712-0340 from 8:30 a.m. to 5:30 p.m. PDT, Monday through Friday, and can be reached at his cell phone 415-902-6112 most other times.

Respectfully submitted,

Dated: 18 May 2005

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